

In the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application.

1.-21. (Cancelled)

22. (Currently Amended) A method of treating a subject to attach microparticles to a ~~body tissueskin surface containing endogenous transglutaminase~~ of the subject comprising contacting the ~~body tissueskin surface containing endogenous transglutaminase~~ with microparticles having surface available transglutaminase substrate reactive groups in an amount sufficient to attach the microparticles to the ~~body tissueskin surface~~ in the presence of ~~the endogenous-transglutaminase~~,

allowing the microparticles to remain in contact with the ~~body tissueskin surface~~ for a time sufficient to permit a layer of microparticles to covalently attach to the ~~body tissueskin surface~~,

wherein the transglutaminase substrate reactive groups are part of a polymer, and

wherein the polymer comprises a polymer selected from the group consisting of polymers containing:

- (a) at least two contiguous linked lysines,
- (b) at least three contiguous linked lysines,
- (c) at least four contiguous linked lysines, and
- (d) at least five contiguous linked lysines.

23.-24. (Cancelled)

25. (Currently Amended) A method of treating a subject to attach microparticles to a ~~body tissueskin surface containing endogenous transglutaminase~~ of the subject comprising contacting the ~~body tissueskin surface containing endogenous transglutaminase~~ with microparticles having surface available transglutaminase substrate reactive groups in an amount sufficient to attach the microparticles to the ~~body tissueskin surface~~ in the presence of ~~the endogenous-transglutaminase~~,

allowing the microparticles to remain in contact with the ~~body tissueskin surface~~ for a time sufficient to permit a layer of microparticles to covalently attach to the ~~body tissueskin surface~~,

wherein the transglutaminase substrate reactive groups are part of a polymer, and

wherein the polymer comprises a polymer selected from the group consisting of polymers containing:

- (a) at least five contiguous linked glutamines,
- (b) at least ten contiguous linked glutamines,
- (c) at least fifteen contiguous linked glutamines, and
- (d) at least twenty contiguous linked glutamines.

26.-101. (Cancelled)

102. (Currently Amended) A composition comprising a microparticle comprising an active agent and a polymer having transglutaminase substrate reactive groups, wherein the microparticle is non-biodegradable, and the transglutaminase substrate reactive groups are surface available, and the polymer comprises a polymer of amino acids having ~~at least 20% lysines or~~ at least three contiguous linked lysines.

103.-116. (Cancelled)

117. (Original) The composition of claim 102, wherein the transglutaminase substrate reactive groups are surface available in an amount sufficient to attach the microparticle to a ~~skin surface~~ body tissue in the presence of endogenous transglutaminase.

118. (Original) The composition of claim 102, wherein the transglutaminase substrate reactive groups are surface available in an amount sufficient to attach the microparticle to a ~~skin surface~~ body tissue in the presence of exogenous transglutaminase.

119. (Previously Presented) The composition of claim 102, wherein the polymer comprises a polymer of amino acids and wherein at least 50% of the amino acids are lysine.

120.-122. (Cancelled)

123. (Previously Presented) A composition comprising

a microparticle comprising an active agent and a polymer having transglutaminase substrate reactive groups, wherein the transglutaminase substrate reactive groups are surface available, and the polymer comprises a polymer of amino acids having at least three contiguous linked glutamines.

124. (Original) The composition of claim 123, wherein the transglutaminase substrate reactive groups are surface available in an amount sufficient to attach the microparticle to a ~~skin surface~~ body tissue in the presence of endogenous transglutaminase.

125. (Original) The composition of claim 123, wherein the transglutaminase substrate reactive groups are surface available in an amount sufficient to attach the microparticle to a ~~skin surface~~ body tissue in the presence of exogenous transglutaminase.

126.-134. (Cancelled)

135. (Previously Presented) The composition of claim 123, wherein the polymer is covalently linked to ~~the~~ synthetic polymer.

136. (Previously Presented) The composition of claim 123, wherein the polymer comprises a polymer of amino acids and wherein at least 20% of the amino acids are glutamines.

137.-144. (Cancelled)

145. (Previously Presented) The method of claim 22, wherein the polymer is a polymer containing at least two contiguous linked lysines.

146. (Previously Presented) The method of claim 22, wherein the polymer is a polymer containing at least three contiguous linked lysines.

147. (Previously Presented) The method of claim 22, wherein the polymer is a polymer containing at least four contiguous linked lysines.

148. (Previously Presented) The method of claim 22, wherein the polymer is a polymer containing at least five contiguous linked lysines.

149. (Previously Presented) The method of claim 25, wherein the polymer is a polymer containing at least five contiguous linked glutamines.

150. (Previously Presented) The method of claim 25, wherein the polymer is a polymer containing at least ten contiguous linked glutamines.

151. (Previously Presented) The method of claim 25, wherein the polymer is a polymer containing at least fifteen contiguous linked glutamines.

152. (Previously Presented) The method of claim 25, wherein the polymer is a polymer containing at least twenty contiguous linked glutamines.

153.-154. (Cancelled)

155. (New) The method of claim 22, wherein the transglutaminase is endogenous transglutaminase.

156. (New) The method of claim 22, wherein the transglutaminase is exogenous transglutaminase.

157. (New) The method of claim 22, wherein the body tissue is a body tissue containing endogenous transglutaminase.

158. (New) The method of claim 22, wherein the body tissue is integument.

159. (New) The method of claim 158, wherein the integument is skin.

160. (New) The method of claim 158, wherein the integument is the surface of the eye.

161. (New) The method of claim 158, wherein the integument is a mucous membrane.

162. (New) The method of claim 22, wherein the body tissue is an internal tissue.

163. (New) The method of claim 22, wherein the microparticles further comprise an active agent.

164. (New) The method of claim 25, wherein the transglutaminase is endogenous transglutaminase.

165. (New) The method of claim 25, wherein the transglutaminase is exogenous transglutaminase.

166. (New) The method of claim 25, wherein the body tissue is a body tissue containing endogenous transglutaminase.

167. (New) The method of claim 25, wherein the body tissue is integument.

168. (New) The method of claim 167, wherein the integument is skin.

169. (New) The method of claim 167, wherein the integument is the surface of the eye.

170. (New) The method of claim 167, wherein the integument is a mucous membrane.

171. (New) The method of claim 25, wherein the body tissue is an internal tissue.

172. (New) The method of claim 25, wherein the microparticles further comprise an active agent.

173. The composition of claim 102, wherein the active agent is selected from the group consisting of a cosmetic agent, a bulking agent, a hair conditioning agent, a hair fixative, a sunscreen agent, a moisturizing agent, a depilatory agent, an anti-nerve gas agent, a film forming agent, a vitamin, an insect repellant, a coloring agent, a pharmaceutical agent, a ligand-receptor complex and a receptor of a ligand-receptor complex.

174. The composition of claim 123, wherein the active agent is selected from the group consisting of a cosmetic agent, a bulking agent, a hair conditioning agent, a hair fixative, a sunscreen agent, a moisturizing agent, a depilatory agent, an anti-nerve gas agent, a film forming agent, a vitamin, an insect repellant, a coloring agent, a pharmaceutical agent, a ligand-receptor complex and a receptor of a ligand-receptor complex.

175. (New) A kit comprising

a package including a container containing the composition of claim 102 and instructions for topically administering the composition to a skin surface.

176. (New) A kit comprising

a package including a container containing the composition of claim 123 and instructions for topically administering the composition to a skin surface.

Remarks

Prior to this amendment claims 1-26, 51, 75-77, 102, 117-119, 123-125, 135, 136 and 143-154 were pending. Claims 1-21, 23, 24, 26, 51, 75-77, 143, 144, 153 and 154 have been cancelled; however, Applicants expressly reserve the right to file one or more continuing applications on the subject matter of the cancelled claims. Claims 22, 25, 102, 117, 118, 124, 125 and 135 have been amended. New claims 155-176 have been added. Support for the claim amendments and new claims can be found on pages 14 and 91 of the specification and in the claims as originally filed. Therefore, claims 22, 25, 102, 117-119, 123-125, 135, 136, 145-152 and 155-176 are now pending.

A new copy of prior art references from the PTO Form 1449 filed on February 11, 2002 are herewith provided pursuant to Examiner's request. A new PTO Form 1449 is also provided for the Examiner to initial and include with the next communication to the Applicants.

Claim Rejections-35 USC §103

The Examiner has rejected claims 1, 3-19, 23, 24, 26, 51, 75-77, 143, 144 and 153 under 35 USC §103(a) as being unpatentable over Richardson et al. in view of Bernstein et al. or Mathiowitz et al. and each taken with Won.

While not conceding the validity of the Examiner's rejection of these claims, Applicants have cancelled the claims listed in regard to this rejection in order to expedite the prosecution of this application. Therefore, the need to respond to the Examiner's rejection has been obviated.

Claim Rejections-35 USC §103

The Examiner has rejected claims 2, 20, 21, 102 and 117-119 under 35 USC §103(a) as being unpatentable over Richardson et al. in view of Bernstein et al. or Mathiowitz et al., each taken with Won, and further in view of Zheng et al.

While not conceding the validity of the Examiner's rejection of these claims, Applicants have cancelled claims 2, 20, and 21 and have amended claim 102 in order to expedite the prosecution of this application. Amended claim 102 now has a scope similar to that of the claims already deemed by the Examiner to be free of the recited art.

Applicants, therefore, maintain that the amendment of claim 102 is sufficient to put claim 102 and dependent claims 117-119 in condition for allowance and respectfully request the Examiner withdraw his rejection of claims 102 and 117-119 under 35 USC §103(a).

Claim Rejections-35 USC §102

The Examiner has rejected claims 143 and 144 under 35 USC §102(b) as being anticipated by Bernstein et al. or Mathiowitz et al.

While not conceding the validity of the Examiner's rejection, Applicants have cancelled claims 143 and 144 in order to expedite the prosecution of this application. Therefore, the need to further respond to this rejection is obviated.

Double Patenting

The Examiner has rejected claims 1-26, 51, 75-77, 102, 117-119, 123-125, 135, 136, 143 and 144-154 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-48 of US Patent No. 6,267,957 in view of Bernstein et al. or Mathiowitz et al, and each taken with Won.


As stated above, while not conceding the validity of this rejection, Applicants have cancelled claims 1-21, 23, 24, 26, 51, 75-77, 143, 144, 153 and 154 and herewith submit a terminal disclaimer over US Patent No. 6,267,957 in order to expedite the prosecution of this application.

Applicants respectfully request that the Examiner withdraw the rejection under the judicially created doctrine of obviousness-type double patenting in light of the claim cancellation and submission of the terminal disclaimer.

Summary

Applicants believe that each of the pending claims is now in condition for allowance. Applicants respectfully request that the Examiner telephone the undersigned in the event that the claims are not found to be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representative at the telephone number listed below.

Respectfully submitted,



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